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(12) United States Patent

Yamaguchi

(54) HOME PICTURE/VIDEO DISPLAY SYSTEM WITH ULTRA WIDE-BAND TECHNOLOGY

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See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

6,535,239 2002/0093575 2003/0016844 2003/0140296 2003/0164794 2003/0171652 2003/0214967	A1* A1 A1* A1 A1	7/2002 1/2003 7/2003 9/2003 9/2003	Kim 348/14.02 Kusaka 348/233 Numaoka 714/749 Haynes et al. Vokoi et al. Helperling 370/437
2003/0214967	A1*	11/2003	Heberling 370/437

(Continued)

OTHER PUBLICATIONS

"A UWB Architecture for Wireless Video Networking", G. R. Aiello, L. Taylor and M. Ho, reprinted from the Internet at: www.staccatocommunications.com/papers/icce-final.pdf, 10 pgs.

(Continued)

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(57) ABSTRACT

A new display system and method is described, utilizing a cellular telephone having digital camera capability and a television linked directly over a UWB wireless signal forming a UWB wireless video pico-net. The system utilizes a digital camera unit to capture picture or video images for UWB transmission directly to the television acting as a pico-net host controller, either independently or together with the cellular telephone operating as a pico-net child. The display system comprises and one or more remote devices and a host display communicating on a UWB wireless network. The host display comprises a display for presentation of the picture or video images and a UWB transceiver for processing image data from the picture or video images, for selectively sending and receiving the image data based on a request from the child. The one or more remote devices comprise a digital camera for capturing the picture or video images and another UWB transceiver as used in the host display. The host display has a generally larger display for improved presentation of the captured picture or video images useful and amusing for group, party, wedding, and conference viewing, or simply for enhanced personal enjoyment. For picture or video image sharing, the system further facilitates downloading the current picture or video images from the host display television to a requesting cellular telephone or digital camera equipped with the UWB transceiver. The UWB display system provides sufficient bandwidth to support numerous such download requests simultaneously, while utilizing a transmission technology having minimal power consumption.

25 Claims, 7 Drawing Sheets

